

CYTRON MASTERS



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PREPARATIONS FOR BATTLE

by Bill Bunten



Evening slowly spread its scarlet wings across the Hykernian imperial valley. The capital rose like a crimson cliff, overlying the valley and the darkening sea beyond. The inner city, while not walled apart, stood distinct and aloof from the normal bustle of commerce. The gothic spheres and domed towers displayed an ancient atmosphere, if you ignored the spiderweb of skyways linking the inner city palaces. In the web's center, shimmering in the opulence of its empiric wealth, towered the imperial palace.

The imperial palace consisted of clustered castles and courtyards. Today they hustled with even more activity than normal. Tomorrow a CYTRON battle would settle a border dispute with the Athite empire over a frontier planet. Streams of float ships filled the skyways with brightly clothed dignitaries. Not all castle courtyards buzzed with activity, though. The stark grey walls of the CYTRON Master's courtyard were silent as he prepared for battle.

Lothar, the new CYTRON Master for Hykernia, prepared for tomorrow's battle by sitting motionless. Or more precisely, by relaxing in the lotus position suspended above the marble floor. An energy field of his creation surrounded him, humming slightly, the only sound discernible. He looked too young to be a CYTRON Master, but his limbs promised power and grace, and his watchful eyes would neither blink nor yield. Evening's shadows lengthened on the courtyard wall as he meditated. Tomorrow would be his first battle as a Master. The old Hykernian CYTRON Master had retired, and Lothar arrived from an outbound training temple of a little known style.

Lothar did not contemplate, as those in the palace supposed, battle strategies or CYTRONS at all. Instead, he thought of nothing, consciously, allowing his mind to

choose its own path in a nonfocused search for harmony. While CYTRONS were not on the master's mind, they were certainly on the emperor's, and everyone else's in the palace, planet, and even the empire. If CYTRONS in general were not foremost on their minds, they were at least contemplating the outcome of tomorrow's CYTRON battle. CYTRON philosophy was left to the training temples, and CYTRON history was shrouded by time's mists and shadows. Training schools guarded their version of CYTRON history as they did all aspects of novice development.

If not for the CYTRON, though, history itself in the rim worlds would have ended centuries ago, strangled by interplanetary aggression. Before CYTRONS and symbolic war, starfleets hissed white light across galaxies, shrivelling people and planets alike. The cost of galactic war had drained many planets of their energy. Left helpless, they were easy victims for planet plunderers. Warcraft robots threatened human extermination; a revolution in thinking was needed for survival.

However, the seeds of change weren't planted by philosophers as would be expected. Planets dying outraged them, but only war councilors received ready audience at emperor's courts. The prize of victory was too sweet — the spoils of war too great. After all, the difference between killing a person or a planet is only numbers. Although philosophers had no voice in policy, economists did; and their counsel gave birth to the CYTRON age.

Energy to feed the war machines threatened the nobility's good life, and indeed all life. Economic truths could bypass diplomatic tangles, and speak in a language all kings

understand. Now it made sense to listen to the philosopher's pleas for peace; if not for the humanitarian reasons, for economic survival. Peace spread across the rim worlds. For a generation planets prospered. However, genetic tinkering could not remove inborn aggression, and peace was fragile without a universal method for settling disputes. Economists found an outworld prophet, Titus of Tauron, preaching Symbolic War; and CYTRONS, the offspring of former death robots, were born. The limited intelligence and power of CYTRONS (Cybernetic Electronic Devices) would allow war games without a threat to peace. An Intergalactic Commission was empowered to supervise CYTRON Matches, and keep "robot war" forever a memory.

War, though, even if symbolic, is serious business. A rigid structure was needed if CYTRON battles could settle major disputes. Trust in the fairness of the outcome had to be absolute.

The CYTRON contests take place in an outdoor arena, allowing spectator seating for the privileged. CYTRONS are limited in type, function, and mobility. The object: Destroy your enemy's Command Center. A CYTRON Battle combines intellectual cunning and quick, daring action, with only one human contestant on each side. CYTRONS are managed from a computer terminal.

The importance of the manager created an elite caste, composed of trainees, novices, Masters, and Grandmasters. This caste became politically independent of any kingdom. However, it was supported by all kingdoms, providing the Masters for CYTRON battles. The selection and development of CYTRON Masters quickly institutionalized into esoteric rituals, jealously guarded by rival training temples.

A CYTRON Master is the zenith achievement of warrior development, excelling in all forms of warcraft with uncanny physical and mental abilities. Selected for novice training at childhood, CYTRON Masters spend years learning the rituals and lore of their temple style.

CYTRON Masters manage CYTRONS as naturally as writers use words to communicate. Hooters, Bunkers, Missiles, Mines and Commanders are the tools of their trade, and successful stylists are jealously recruited by emperors anxious to expand their influence.



The twilight had robbed the evening of its colors as Lothar ended his meditation, performing intricate exercises so quickly his limbs were indiscernible blurs. He finished his 'form' in the ready position as an acolyte in the white robes of a learner crossed the courtyard.

"Master," addressed the apprentice reverently. "An imperial transport is on the landing roof to carry you to the emperor's court."

The Master answered gently, "An eve of battle gathering, to test my preparedness, and of course drink the emperor's wine. Well, let us proceed."

The flight to the emperor's court was rapid: imperial float ships have automatic security clearance and use priority skypaths. A domed roof opened, allowing the ship entry. It slowly descended through a cavernous chamber, with intricate wall tapestries lit by globe lights. An imperial guard unit snapped smartly to attention as the Master soundlessly crossed the marble floor. The gold doors to the inner chamber opened silently. Waves of court gatherers separated, allowing the Master to slowly cross the chamber whose height disappeared in distance. If the Master noticed the ponderous splendor, he gave no sign, but continued his steady approach to the emperor's dais. The motley, if dignified, assembly from all reaches of the empire openly evaluated the Master as he passed. The usual entourage of ministers and aides surrounded the emperor, who greeted the Master in an animated, if not particularly warm fashion: "Welcome, Lothar, and how went your final training? Well, I trust?"

"Yes, my Lord," the Master replied in a voice which, while soft, seemed, laced with steel. It carried remarkably far, considering his quiet tone. "And how is the business of running an empire?"

"That business is preoccupied with tomorrow's battle at present, its it not?" asked the emperor, causing a ripple of bobbing heads beginning with the closest ministers and spreading like a wave throughout the assembly.

in an ever-widening arc, until minutes later it died on the polished walls.

The emperor, his current flock of favoured ministers, and the CYTRON Master formed a small circle on the raised dais. An invisible hand seemed to push the other out of earshot. "Our good minister of economics has been instructing us on the necessity of tomorrow's victory," said the emperor with the gentle hiss of a cobra. "Perhaps you would like to be so enlightened?"

Lothar did not respond, but turned his calm gaze to the good Minister of Economics, waiting for Lord Goldfarthing to speak, whether it took a second or a century. Lord Goldfarthing, sweating under the CYTRON Master's unblinking stare, started a smile in the lower regions of his face; but either the way north was impassable, or the trail was lost with disuse, for it never arrived at his eyes. Those eyes darted like a startled rabbit, searching for a burrow. Finding a sympathetic wall to gaze on, the minister answered in the jargon increasingly common to his kind: "The current rate of depletion of nonrenewable resources in the production of consumer durable, and nondurable items requires a continuous supply of minable and portable, chemically forgable units. If not found in undecreasing quantities, price levitating forces will prevail, lessening our current comparative, competitive advantages. The acquisition, by CYTRON victory tomorrow, of the planet rim-345, sol-23, would provide a negative effect to any such depletion."

Feeling this tirade surely safeguarded his dignity, the minister of economics looked around the blank group like a hawk at pigeons, daring interference, while under the guise of scratching his great beak, he quickly checked for his own renewable resources.

The lord Minister of Planetary Languages, with unpigeoned boldness chirped, "Goldfarthing means tomorrow's victory is important to our trade since the world at stake has an abundance of natural resources."

So . . . Lothar . . .", began the emperor, who in a burst of energy had read a book on leadership, and felt the best way to manage a conference was to control its conversation. The leader, so the emperor remembered, rapidly interjects any pause with his own knowledgeable view. Pausing for insight, but aware of awkward silences, the emperor muddled on,

"So . . . I say . . ." hesitating only slightly. "I say . . . without hesitation . . ." finding his rhythm, the emperor quickened his tempo. "Lothar, what do you think about it?" Finishing strongly, the emperor struck a stance he thought was suitably bold; however, given his weight and symmetry, it bordered more on the precarious.

"Economics and politics hold no interest for me," answered the CYTRON Master simply, with a quiet certitude that denied argument. "CYTRON battles and warcraft alone fill my time." The emperor watched hopefully, but Lothar, unbothered by pauses, was comfortably finished. He had no wish to talk without a purpose.

Unfettered by any such limiting wish himself was the Lord Minister of Defense. Hearing of warcraft, and being quick off the mark, he was searching for something to say. The Ministry of Defense was now a ministry without a function, and had been for the two thousand years since symbolic war eliminated serious concern for safety. Ever mindful of his vestigial function and the tasty fruits it bore; the Minister of Defense sorely wished for an enlightened comment, or two, if his wit sustained him that many. Physically less the bulldog than the walrus, his eyes made an attempt at sparkling, but the feat surpassed his ability for they remained a washed and limpid grey. "What, may I ask, hmmm, is your battle gambit to be?" The minister was particularly pleased with his use of 'gambit'. Having almost said 'opening', 'gambit' came as an inspiration as his mouth reached for the letter 'o'. Pleased as hmmm, punch, the minister would now enjoy having Lothar on the defensive.

"I have no opening in mind," answered Lothar. "Openings, or gambits as you prefer to call them, are simply classifications by amateur observers attempting to understand the complexity of CYTRON victories. No Master limits himself with a preconceived opening structure."

"But," sputtered the Minister of Defense, a surfacing walrus barking for air. "Most victories of the past few years are of no more than a dozen distinct openings. Is it not said. 'The Master wins who is quickest at opening development'?"

"Regardless of what is said, the Master wins that sends a Mine through the enemy's Command Center." Commented Lothar gently.

"Everything else is irrelevant, including opening, style, or tactical wizardry." If Lothar tired of verbally sparring with the unarmed, he gave no sign. He continued a serene resignation to the present, whatever its form.

The Minister of Defense defensively snapped his puffing mouth shut. Sounding like stepping on boiled shrimp, it reminded the Minister of Advice to announce that the banquet was being served. "With the emperor's permission, should we begin?" Being ignored all around, he advised that the food would soon be cold. Having filled his function admirably, the Minister of Advice was quiet for the rest of the evening.

The concern about tomorrow's battle hung humid in the air, like the emperor's bouts of bad breath: obvious but uncommented upon. It was on everyone's mind, in vari as ferus, of course, depending on individual capacities. However, no one seemed willing to ask. The emperor, ever mindful of awkward silences, cleared his throat, and, folding his arms in a gesture of impatience, hit his royal fumyphone with his imperial signet ring. Perhaps to cover the tingling, he shook his fist and asked, "But can you be sure, Lothar? This is your first Master Tournament. And unlike fighting at the training temples, the outcome is important. We need to win that planet." Startling no less a person than his royal self with his mastery of the moment, the emperor waited impatiently.

"Worry not for tomorrow and my desire for victory," began Lothar, "My need for victory is as natural as your need to breathe. Every particle of my being strives to win to the fullest extent conceivable."

"Then why not discuss your strategy for battle?" interjected the Minister of Defense with the staccato harking of an angry seal. "I am not without knowledge in battle tactics."

"Predetermined openings are a crutch," responded the CYTRON Master. "When a Master observes his opponent leaning on them, he will upset the crutch with unorthodox maneuvers." In some unexplained way, Lothar seemed to hold each minister's eye as he talked. "All warfare is a function of three concepts: Space, Time, and Strength. Power is their derivative. In a CYTRON Battle, power is equal at the start, but the enormous permutations as a battle progresses render predetermined

tactics obsolete. To win, you must gain a 'power edge' by keeping the three concepts in better balance than your opponent does."

"Time, space, and strength equal power? Sounds like another useless temple quote, impossible to argue, but of no practical value," countered the emperor knowingly, himself overly fond of trite proverbs like 'attack or perish'.

"The commonly called 'temple sayings' are never heard in the training temples," the CYTRON Master answered. "Time' is the power of quick development. 'Space' is the power of position: a Mine stopped in a corner is not as powerful as one near the enemy's Command Center. 'Strength' is relative: a Shooter without position is powerless. General principles must guide; your attack is improved by commands that maximize your net power. This alone leads to victory against a Master."

"Litter that do I give a Master attack," interjected the Minister of Defense, determined to make a point before the topic changed.

"A Master seldom uses Missiles except for defense. To do otherwise reduces net power," Lothar answered in the level tone that was beginning to grate on everyone's nerves.

The emperor, feeling a small volcano erupt in the nether regions of his vast and unmapped stomach, invited Lothar to join them in feasting. Lothar declined, for training purposes, and returned to the outer chamber. The float ship quickly flew the CYTRON Master to his castle.

Lothar worried not of the emperor and his ministers. They were reminiscent of the humming of blue-bottle flies during meditation training: unimportant and unworthy of consideration, simply a part of life. His temple was highly respected, and when the former Hykernian Master retired, the emperor personally visited Lothar's temple, resulting in his commission as CYTRON Master of Hykernia.

Tomorrow he battled the Master of the Mithite empire, who was undefeated in 47 imperial contests, three victories from confirmation as a Grandmaster. Grandmastership is the wishful goal of Masters desiring their own training temple. Lothar cherished few goals — an orphan's habit — but this was one.

The morning was crisp and blue as Lothar dressed in ceremonial battle armour. He

had slept deep and dreamlessly. His actions were *deft* and *unhurried*, showing neither *dread* nor *anticipation*, simply acceptance and *readiness*.

The coliseum was full as the CYTRON Master's floatship landed. The emperor and ministers filled the imperial booth with shimmering silks. The Hykernians rose, and silently saluted his arrival as Lothar stepped from the ship and approached his station.

As Lothar approached, the Mithite Master

waited, serene and confident. His grey hair, slightly breeze-caressed, belied his seamless face and pantherish grace. His eyes, though, showed the scars of years of battle concentration. Lothar looked into those eyes for a lifetime before they bowed to one another. Lothar sat before his computer console, and quickly checked its controls. Now it was only a matter of moments. Lothar waited relaxed, prepared for battle. The transport beam flashed green, and the crowd began to roar as one. Lothar heard nothing; the battle had begun.



OFFICIAL CYTRON BATTLE RULES OF THE INTERGALACTIC COMMISSION

There are two ways to become familiar with the rules and sacred traditions governing symbolic warcraft. For those players truly wishing to attain the zenith of "CYTRON MASTER," a computer-interactive apprenticeship has been provided on your game diskette. This complete initiation was graciously prepared by Grand Master Titus III (known as "Titus the Terrible"!). The valuable lessons to be learned are taken from his voluminous masterwork "The Imponderable Algorithms of War." Titus will carefully guide your learning experience as you seek to master the subtle art of symbolic warcraft.

For the benefit of those players who choose not to participate in the apprenticeship, and for the future reference of all players, the following synopsis of the major features of warcraft is presented.

THE CYTRONS

There are four types of "standard" CYTRONS (CYbernetic elecTRONic deviceS) used in waging symbolic war. These are: Mines, Bunkers, Shooters, and Commanders. Each type has unique capabilities, limitations, and resource costs. However, all "standard" CYTRONS have the following common qualities:

- 1) each is a ground unit
- 2) each occupies one space on the battlefield
- 3) each obstructs the passage of other CYTRONS through its location
- 4) each moves at a uniform speed
- 5) and each may capture or recapture Power Centers.

Missiles and Anti-Missiles are "non-standard" CYTRONS and are not subject to the characteristics just mentioned.

MINE

A Mine CYTRON is a mobile bomb. The device explodes on impact with any opponent CYTRON, destroying both itself and the enemy unit. Mines are the only CYTRON capable of destroying your opponent's Command Center. In addition, Mines are heavily armored against laser cannon attacks and have only a 25% chance of being destroyed when hit by an enemy Shooter.

BUNKER

Bunker CYTRONS are mobile defensive fortifications. Bunkers have no offensive weapons, but are used to protect "friendly" CYTRONS which can "hide" behind them. A Bunker can withstand two collisions with enemy mines, ten laser cannon hits, or a combination of the two types of damage before it is completely destroyed. A single Mine will cause 50% damage to a Bunker, while a single laser hit will cause 10% damage.

SHOOTER

Shooter CYTRONS have long-range offensive capabilities. These units are armed with a powerful laser cannon. Shooters can scan (to locate) and fire upon enemy CYTRONS up to three spaces away from their position. Their laser fire never damages "friendly" CYTRONS, even when "friends" are between the Shooter and its target. (This is due to the "spectral opacity matter" from which CYTRONS are constructed, making them transparent to their own lasers, while vulnerable to those of the enemy.)

Shooters continually scan for enemy units within their three-space range and fire at the closest unit. If several enemy CYTRONS are at the same distance within range, the unit directly in front of the Shooter will always be fired upon first. Shooters have moderate defensive armor and are destroyed 50% of the time by enemy laser fire. A collision with an enemy Mine is always fatal.

COMMANDER

A Commander CYTRON can be used by a human manager (playing participant) to relay battle orders to all "friendly" CYTRONS within three spaces of the Commander's location. Commanders can transmit the following orders to ground troops within range: advance, retreat, halt, move north, or move south. All CYTRONS within three spaces of the Commander will execute the battle order.

This CYTRON has no offensive weapons and has only minimal protective armor. Commanders are destroyed by a single laser hit 75% of the time. A collision with an enemy Mine is always fatal.

MISSILES

This special type of CYTRON does not participate in the battle taking place on the field, but flies over it. Immediately after a manager launches a Missile, all other action on the battlefield is temporarily suspended. The manager who launches the Missile has complete and constant control over the Missile's flight path by using the analog-to-digital converter (a game paddle may be substituted) as follows:

Set the paddle in the center range and the Missile "advances" straight ahead into the battlefield. Counterclockwise from center is a range that causes the Missile to turn left of its advance direction. Similarly, clockwise from center is a range that causes the Missile to turn right from its advance direction. At either extreme of clockwise or counterclockwise paddle settings, the Missile will turn backwards from its advance (i.e., retreat).

While the Missile is over the battlefield, a count-down clock shows the time remaining to self destruction. Whenever time is left on the count-down clock, the manager can press the paddle button to start the Missile's descent. When the Missile reaches ground-zero, it will destroy all CYTRONS (both enemy and friendly) in a one-space radius around the center of impact. A single Missile can, therefore, destroy up to four enemy CYTRONS at once. The enemy units are not totally defenseless against an attack, however. All enemy CYTRONS are alerted (through their Command Center) that a Missile has been launched. Each enemy unit will emit a microwave jamming beam in an effort to confuse the Missile's directional locating ability. The jamming beam is not strong enough to completely deter an attack, but it may succeed in causing the Missile to impact slightly off the intended target.

Battlefield installations (Power Centers, Command Centers, and Beam Points) cannot be damaged by Missiles. In addition, if a Missile moves across a battlefield boundary, it will automatically self-destruct and will cause no damage. The automatic self-destruction mechanism is a safety precaution to protect human spectators from a stray Missile explosion.

ANTI-MISSILE

Whenever one manager launches a Missile, the opposite player may launch an Anti-Missile to attempt to destroy the Missile in the air. An Anti-Missile is controlled the same way as a Missile, but cannot cause damage to ground units. An Anti-Missile's only function is to get very close to the opposing Missile and then detonate (caused by its manager pushing the paddle button). If the Anti-Missile is close enough to the Missile when detonated, it will destroy the Missile in the air and effectively eliminate any threat to ground troops. If the first ANTI is not successful, and the Missile is still airborne, then the manager may fire another ANTI. In fact, he can fire an unlimited number as long as the Missile has not exploded. Anti-Missiles do not cost any Power resources.

THE BATTLEFIELD

All CYTRON matches take place in an arena that is 380 dectres long by 180 dectres wide. The total battlefield area, then, is 68,400 square dectres. Since such an area is much too large to easily observe, a video display console using symbols to represent all the features of the battle is provided for the convenience of the human managers. Each space on the video display is equivalent to ten dectres on the battlefield. Thus, the video screen's battlefield is 38 spaces by 18 spaces.

Three types of installations are located on the battlefield. These are Command Centers, Power Centers, and Transport Beam Points.

COMMAND CENTERS

The most important installation on the battlefield is the Command Center complex. Each manager has dominion over one Command Center on his side of the battlefield. It is within the depths of this facility that all CYTRONS are constructed and then beamed onto the field. Missiles and Anti-Missiles are also launched from a silo inside the complex.

A Command Center cannot be captured — only destroyed. The manager that succeeds in destroying his opponent's Command Center automatically wins a victory in the match. A Mine is the only CYTRON capable of destroying a Command Center. This is accomplished by sending the Mine directly into the middle of the Command Center, whereupon it will automatically detonate.

POWER CENTERS

There are eight Power Centers on the battlefield — four on each side of the middle. These sites provide the energy and other resources used in producing battleworthy CYTRONS. At the beginning of a match, each manager owns the four Power Centers on his side of the field.

Power Centers cannot be destroyed, but are "capturable." Any Center may be captured (or re-captured) by moving a CYTRON through the middle of the site. The CYTRON can move through the Power Center from either side, or from the top or bottom. (Beaming a CYTRON into the middle of the Center will suffice!) The current "ownership" of each site is indicated by a line on the Power Center symbol which points to the side which "owns" it. Ownership of Power Centers is important since they provide the only means of obtaining the resources necessary to produce a continuous stream of new CYTRONS. Managers who own few Power Centers will receive very little new energy stores, and will be forced to curtail production of additional CYTRONS.

TRANSPORT BEAM

Each Command Center contains a molecular dispatch device called the Transport Beam. This device is used to convey a newly created CYTRON to a specified position on the battlefield called the Beam Point. After arriving at the Beam Point, the new CYTRON will then immediately begin executing its initial battle program.

The Beam Point can be located at almost any X-Y coordinate position on a manager's side of the field. The current position of each manager's Beam Point will be indicated by a special marker on the video display. Once the Beam Point has been positioned, the manager can put a new CYTRON on the field at one of three sub-locations: directly above the Beam Point, directly below it, or in its center. As each new CYTRON is created, it will continue to be transported to one of these battlefield sub-locations until the Beam Point is relocated to a different coordinate position.

THE BATTLE

The object of each CYTRON match is to destroy your opponent's Command Center. This goal can only be achieved through wise and prudent administration of your resources and troops. Your ultimate fate in a match will depend not only on a sound battle plan, but also on your expertise in managing and directing your CYTRONS to carry out the plan. Remember that many would-be "MASTERS" have suffered swift and certain defeat because they chose to control their CYTRONS rather than manage them.

All CYTRONS have a limited intelligence which enables them to execute their initial battle programs without the need for constant human intervention. Thus, the victorious practitioner of warcraft is not simply an "arena brawler," but a shrewd and clever administrator. Calling the two playing participants "managers" is consistent with the degree of control they can exercise over their CYTRON troops.

The human managers create and direct their CYTRONS through the use of analog-to-digital converter devices. (Game paddles may be substituted.) These controllers allow both managers to simultaneously make menu selections that implement their respective battle strategies during the progress of the match.

Each human manager may:

- 1) select the type of CYTRON to make and the place where it will enter battle
- 2) give intermittent instructions to individual CYTRONS concerning direction of movement
- 3) transmit battle orders to field Commanders.

No manager can effectively control all of his CYTRONS all of the time.

The four main menu options available to each manager are: MAKE, DIRECT, ORDER, and LOCATE. The A/D devices (or game paddles) are used to dial through the options shown on the manager's video display screen. The A/D device button is pushed to select an option.

MAKE

As a manager, you have several choices available which allow you to create each CYTRON to your specifications.

TYPE: After choosing the MAKE option of the main menu, you will see a sub-menu display from which you will choose the type of CYTRON you wish to create. The choices are to create a Mine, Shooter, Commander, Bunker, Missile or to exit the MAKE option.

Note: Among any group of sub-menu options there is one titled "[exit]." This only appears when the paddle is at its lowest setting. If "[exit]" is selected at any time, no action will be taken and you will be returned to the main menu.

LOCATION: The next step is to pick the spot on the battlefield where the new unit will materialize when conveyed from the Command Center. This spot is known as the Beam Point. The Beam Point may be located at almost any X-Y coordinate on a manager's side of the battlefield (as described previously). For any given location of the Transport Beam, the manager must choose among three sub-locations. These are labelled A, B, and C; and correspond to points one space above the Beam marker, directly over the Beam marker, and one space below the Beam marker, respectively.

When the new CYTRON is beamed onto the battlefield, the energy resources consumed in its construction (its Power costs) are deducted from the manager's store of power. This is indicated by the Power Gauge which appears at the bottom of the video display.

Each new CYTRON has an initial battle program that is automatically executed when the unit is transported to the Beam Point. The new CYTRON will advance three spaces away from the Beam Point and then halt. It will remain halted until the manager specifically instructs it to do otherwise.

If an attempt is made to beam a new CYTRON within three spaces of an enemy unit, the new unit may not survive the transport. This is due to the negative reaction between the new unit's dispatched molecular field and the enemy unit's existing energy field. The chances of a new CYTRON being destroyed are:

- 80% if the enemy unit is one space away
- 60% if the enemy unit is two spaces away
- 40% if the enemy unit is three spaces away

Power is deducted from a manager's store even if the new CYTRON does not survive transportation. Therefore, you should not try to create a new unit within three spaces of an enemy if you cannot risk the possible loss of both the unit and the power.

DIRECT

This option allows managers to direct any individual CYTRON currently on the battlefield. The first step is to identify the CYTRON you wish to direct.

1. To start, turn your A/D controller counterclockwise to its lowest setting.
2. As you turn the controller to higher settings, each of your CYTRONS from the top of the video screen to the bottom will alternately flash.

- screen to the bottom will alternately flash.
3. For CYTRONS on the same line, turning the controller higher moves the flashing pointer from the front to the rear.
 4. An arrow on the side of the screen will show the current vertical position of the pointer, and the type of CYTRON will be displayed at the bottom of the screen.
 5. When the pointer reaches the correct CYTRON, press your controller button to select it.

After a particular CYTRON is selected, you may direct it to Advance, Retreat, Halt, move North, move South, or to Destroy itself. North is towards the top of the video screen and South is towards the bottom of the screen. You can direct unwanted CYTRONS to destroy themselves ("Destruct") and thereby eliminate them from the battlefield. A CYTRON that is directed to self-destruct will not cause any other damage. This option may prove to be useful, because a manager can never have more than 50 CYTRONS on the field at any time.

Immediately after you press the controller button, the CYTRON will begin to move in the chosen direction. After moving five spaces, it will halt. This is because CYTRON units do not have an extended memory refresh circuit and will "forget" an instruction after moving five spaces. Remember, CYTRONS only have a "limited" intelligence.

ORDER

This option will allow a manager to relay movement instructions to an entire group of CYTRONS through one of his field Commanders. A manager may have up to three Commanders on the battlefield at any time, and each can relay instructions to a separate group of CYTRONS. By turning the A/D converter, you may choose which Commander to ORDER. A flashing pointer will indicate each Commander in turn, and an arrow will mark the vertical position of the pointer as described previously in DIRECT.

Once a particular Commander has been selected, a movement direction may be given in a manner similar to that used in the DIRECT option. In this case, however, all CYTRONS within three spaces of the selected Commander will execute the instruction.

There may occasionally be a slight delay before your ORDER is transmitted to the field to allow the CYTRON group to become synchronized. Any movement order relayed through a Commander will cause the entire group to move ten spaces before halting (twice as many as in DIRECT, because the Commander provides an extended memory refresh to each individual unit).

Also, once a CYTRON group begins to execute a movement ORDER, the Commander does not have to stay with them. A manager may DIRECT the Commander to halt or retreat (to protect him), and not affect the group's movement program.

LOCATE

This option allows a manager to choose a new position for the Transport Beam Point (the spot where a newly created CYTRON will arrive on the battlefield). The Beam Point may be located at almost any X-Y coordinate on a manager's side of the battlefield. This is done as follows:

1. First, position the Beam's "Y" (vertical position) coordinate using the A/D controller. There are sixteen discrete vertical positions on the field where the Beam can be located.
The lowest setting on the A/D controller corresponds to "No Change"; that is, the Beam's vertical coordinate will be unchanged from its last position. Position #1 (slightly higher setting) corresponds to the vertical coordinate at the top of the screen display, and Position #16 (highest setting) corresponds to the vertical coordinate at the bottom of the display.
2. Next, position the Beam's "X" (horizontal) coordinate, also using the A/D controller. There are sixteen discrete horizontal positions on the field where the Beam can be located.
The lowest setting on the A/D controller corresponds to "No Change" for the Beam's horizontal coordinate. Position #1 (slightly higher setting) corresponds to the horizontal coordinate closest to your side of the field. Position #16 (highest setting) corresponds to the horizontal coordinate near the middle of the field.
3. Once you have successfully LOCATED the Transport Beam, all newly created CYTRONS will arrive at one of three sub-locations (as described in the MAKE section).

A special symbol will indicate on the video display the current location of each manager's Beam Point. Since this marker is only a background feature of the battlefield, any CYTRON moving over it may temporarily obscure it from view. Rest assured that unless you specifically move it, the Beam Point is still there.

MISCELLANEOUS

POWER

Power represents the raw materials and energy needed to create new CYTRONS. The inventory of stored power available to each manager is shown on the display screen just below the battlefield in the form of a "Power Gauge" that is scaled in increments of ten units. The maximum capacity of stored energy is 65 units. CYTRONS use the following amounts of power in their construction:

Mine	1 unit
Shooter	4 units
Commander	4 units
Bunker	2 units
Missile	8 units
Anti-Missile	0 units (free)

Power is removed from the inventory when CYTRONS are created.

Power is added to each manager's inventory according to the number of Power Centers owned each time the Game Clock advances ("ticks"). Each manager receives $\frac{1}{4}$ unit of additional Power (up to the maximum 65 units) for each Power Center owned each tick of the Game Clock. If you own no Power Centers then no power units will be added to your inventory. Thus, it is important to capture and hold Power Centers so that you can keep creating new CYTRONS.

GAME CLOCK

A game clock is displayed on the video screen directory above the battlefield. The clock marks the elapsed time since the beginning of the match. The clock is also used as noted above.

DEFENSIVE BONUS

For any CYTRON (except a Bunker), the probability of being destroyed by a single laser hit is 20% less if the unit is halted (not moving) at the time of the attack. This is due to the fact that stationary CYTRONS are able to generate a denser defensive energy field. In addition, a stationary Shooter will normally get the first shot at an oncoming attacker.

ENDING THE BATTLE

A CYTRON battle ends when one manager succeeds in destroying the Command Center of his opponent. A game may be temporarily suspended (paused) by pressing any key on the computer keyboard. At that time, the game may be ended by pressing the "Q" key (for "quit"). Pressing any key except "Q" will cause the game to resume.

STRATEGY

There are two extreme strategies for starting a match: offensive and defensive. A simplified defensive strategy would consist of creating a line of halted Bunkers followed by Shooters. Commanders could also be used if you wished to advance your defensive line further into the battlefield.

An offensive strategist would create a line of advancing Mines and Shooters. These attackers could be preceded by Bunkers to protect them until they are within range of the Command Center. Using this approach, a manager can disrupt enemy line as they are being formed.

Whatever the strategy selected, managers can use battlefield Commanders to coordinate attacks or defense. Individual CYTRONS can also be DIRECTed for precise control. However, you should realize that DIRECTing CYTRONS is time consuming when compared with

ORDERing them with Commanders.

At some point the outcome of a match may become predictable. For instance, a manager who owns few Power Centers cannot create new CYTRONS very quickly. When his defenses falter, he will be unable to supply many reinforcements. However, the managers should continue until one side is totally destroyed. After all, the outcome of these matches is of such great consequence that neither manager should placidly relinquish his chance of victory!

DEFENDER'S CHANCES OF DESTRUCTION

ATTACKER

DEFENDER	Mine	Shooter	
		Moving	Halted
Mine	100%	25%	20%
Shooter	100%	50%	40%
Commander	100%	75%	60%
Command Center	100%	0%	0%
Bunker (damage)*	50%	10%	10%

* A Bunker is damaged by attacks rather than having a "chance" of destruction. When a Bunker's total damage equals 100% it is destroyed.

DESIGNER'S NOTES

The idea for this game has been growing in me for quite awhile. I have often wondered why you couldn't do an "action" battle game where both players are constantly communicating with their field armies. This is my best effort at this point to create such a game and in the process I feel that I and my compatriots, Jim Rushing and Bill Bunten, have broken some new ground. I hope we will be able to enhance and expand this "game system" to include different mixes of realism and playability in the future.

I would also like to acknowledge the help and support received from the Apple Addicts and the Atari Addicts Computer Clubs, Little Rock, Arkansas. Finally, I have to publicly thank my wife Barbara for the constant motivation and assistance she provides me. (She treats me better if I say things like this!)

CREDITS

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Program: Dan Bunten

Special Effects: Jim Rushing

Manual: Bill Bunten and Jim Rushing

Art and Graphic Design: Louis Hsu Saekow, Don Woo and Kevin Heney

Disc Operating System: Roland Gustaffson

KEY

CYTRONS

SYMBOLS

	LEFT	RIGHT	POWER COST
Mine			1
Bunker			2
Shooter			4
Commander			4
Missile			8
Anti-Missile			0

INSTALLATIONS SYMBOLS

Command Center



Power Center



Beam Point



BATTLEFIELD

GAME CLOCK

